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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,626	09/28/2001	Jean-Pierre Reyat		6912

7590 12/06/2004  
Sughrue Mion Zinn Macpeak & Seas  
2100 Pennsylvania Avenue NW  
Washington, DC 20037-3213

EXAMINER
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POKER, JENNIFER A

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 12/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/889,626	<b>Applicant(s)</b> REYAL ET AL.	
	<b>Examiner</b> Jennifer A. Poker	<b>Art Unit</b> 2832	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 28 September 2001.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-29 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-6 and 8-29 is/are rejected.

7) ☒ Claim(s) 7 is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All    b) ☐ Some \* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

U.S. Patent and Trademark Office  
PTOL-326 (Rev. 1-04)

Office Action Summary

Part of Paper No./Mail Date 20041122

## **DETAILED ACTION**

### ***General Status***

1. This is a first action on the merits of application filed on September 28, 2001. Claims 1-29 are pending and are being examined.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because no drawings were located within the application. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

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5. Claim 6, 15, 16, 17, 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding claim 6, 15 and 27, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 16, applicant duplicates the assertion that iron, boron, and silicon are used as materials.

Regarding claim 17, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Furthermore, applicant states, "or of another type." It was understood that ANY atomic composition would be appropriate. Prior art was applied accordingly.

### *Claim Rejections - 35 USC § 102*

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 5, 6, 8 13-24, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Number 0687134A2 to Yoshizawa.

Regarding claims 1-3, 5, 6, 8, 13, 23, and 29, Yoshizawa discloses thin ribbons of magnetic alloy comprising:

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- (1) A thickness of less than .1mm (30 $\mu$ m);
- (2) A step wherein the thin ribbon is heat-treated (subjected to stresses);
- (3) An insulating layer or film coating;
- (4) A laminate formed by bonding (adhering) the ribbons together with a resin; the laminate having a thickness of between 1 and 100 $\mu$ m (30 $\mu$ m)
- (5) A nanocrystalline soft magnetic alloy comprising an element to improve the magnetic properties of the alloy; the nanocrystalline soft magnetic alloy has a structure, at least part of which is occupied by crystal grains having an average crystal grain size of 100nm and are preferably at least 50% of the alloy structure (page 4, lines 28-32).

Further regarding claim 3, Yoshizawa further discloses that the laminate of the thin ribbons is formed by bonding the thin ribbon with a resin and binding with a band (pressure).

Regarding claim 16, Yoshizawa further discloses the use of Nb, Cu, B, Si, or Zr for elements used in the nanocrystalline soft magnetic alloy (page 3, lines 48-50 and page 4, line 9).

Regarding claim 17, Yoshizawa further discloses several atomic compositions listed on pages 3 and 4.

Regarding claim 15, Yoshizawa further discloses the thickness of the ribbons of nanocrystalline soft magnetic alloy (page 4 line 33) is 30 $\mu$ m or less (page 5 line 35).

Regarding claims 18, 20, and 21, Yoshizawa further discloses the use of colloidal silica, Al<sub>2</sub>O<sub>3</sub>. The strips are heat-treated then air-cooled. Next the ribbons are laminated and bonded together and the cut (example 6, page 9, lines 46-54).

Regarding claim 19, Yoshizawa further discloses the use of oxides for covering the ribbon (page 5, line 40).

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Regarding claim 22, Yoshizawa further discloses the use of a transformer in a circuit comprising primary and secondary winding (page 2, line 58) wherein the nanocrystalline ribbons (after being laminated and bonded) are cut (example 6 page 9, lines 46-54).

Regarding claim 24, Yoshizawa further discloses the use of a transformer component in the form of an "I" shape or an "E" shape (figures 1, 3, 4b)

Regarding claims 27 and 28, Yoshizawa further discloses the laminated strips are further used in a transformer for use in a circuit (page 6, lines 33-37).

Further regarding claims 6 and 8, the bonded metal and polymer (resin) material are cut (example 6, page 9, lines 54),

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4, 9, and 10-12 are rejected under 35 U.S.C. 103(a) as being obvious over European Patent Number 0687134A2 to Yoshizawa.

Yoshizawa discloses the claimed invention except for stating specifically that the resin is a plastic of polyester, polytetrafluoroethylene, polyimide, etc (claims 4 and 9) and a reactive adhesive polymer material (claim 10). It would have been obvious to one of ordinary skill in the art, at the time the invention was made to utilize a suitable resin such as polyester, polytetrafluoroethylene, polyimide for their resistances to heat, wear, corrosion, etc, since it has been held to be within the

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general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 11, Yoshizawa further discloses the use of a resin.

Regarding claim 12, Yoshizawa further discloses that the ribbon is coated with a insulating layer or film (page 5, line 38).

11. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Number 0687134A2 to Yoshizawa in view of European Patent Number 0695812A1 to Yoshizawa, et al, and further in view of U.S. Patent Number 6,794,860 to Schaffer (for motivational purposes).

Yoshizawa (0687134A2) discloses the claimed invention except for toroidal shaped cores.

Yoshizawa, et al, (0695812A1) discloses a nanocrystalline alloy with insulating coating, magnetic core made thereof, and process for forming the coating on the alloy wherein a core is formed into a toroidal shape (page 5, line 37).

Schafer discloses a transformer utilizing a closed core. Although the core may have any closed shape (square, rectangular, oval, etc.), the toroidal shape (ring or circular shape) has been preferred because it is the simplest to manufacture and has the best properties.

One skilled in the art, at the time the invention was made would have found it obvious to combine the teachings of Yoshizawa (0687134A2) in view of Yoshizawa, et al, (0695812A1) and yet further in view of Schafer and utilize a toroidal shaped core for the purpose of simplicity and outstanding properties.

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***Allowable Subject Matter***

12. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

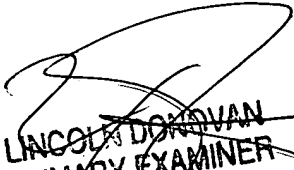
***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Poker whose telephone number is 571-272-1997. The examiner can normally be reached on 4:30-3:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jap  
November 22, 2004

  
LINCOLN DONOVAN  
PRIMARY EXAMINER  
GROUP 2100